

Amendments to the Claims:

1. (Currently Amended) A method for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

receiving a product availability request from ~~[[a]]~~ the user concerning a ~~selected~~ requested product;

accessing the product availability information stored in the storage device for the ~~selected~~ requested product;

determining the availability of the ~~selected~~ requested product based on at least the product availability information stored in the storage device; ~~[[and]]~~

generating an availability response based on at least the product availability information stored in the storage device; and

updating the product availability information stored in the storage device more often for start dates of the ~~selected~~ requested product that occur sooner in time than for start dates that occur later in time,

wherein the requested product can be used beginning on a particular start date and may be used for different lengths of use from the start date;

wherein said storing step comprises storing product availability information including start dates and a maximum length of use for each start date;

wherein said receiving step comprises receiving an availability request from the user concerning the requested product, a requested start date and a requested length of use;

wherein said determining step comprises determining the availability of the requested product for the requested start date and the requested length of use from the product availability information stored in the storage device; and

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said determining step comprises:

dividing the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated selected start date; and

determining the availability of the requested product for each selected start date and selected length of use to determine the availability of the product for the requested start date and requested length of use.

2. (Currently Amended) A method according to Claim 1, wherein said accessing ~~and storing~~ step[[s]] comprises accessing a plurality of product sources[[,]] and requesting[[s]] product availability information concerning at least one product, and said storing step comprises storing[[e]] the product availability information for the at least one product from each product source in the storage device.

3. (Currently Amended) A method according to Claim 1, wherein said updating step comprises updating[[es]] the product availability information stored in the storage device by accessing the product sources, requesting product availability information about the product, and storing the product availability information in the storage device.

4. (Canceled)

5. (Currently Amended) A method according to Claim 1, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said updating step comprises using[[es]] a decaying exponential function to determine which start dates to update the product availability information in the storage device for, such that start dates that occur sooner in time are updated more often than start dates that occur later in time.

6. (Currently Amended) A method according to Claim 1, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said updating step comprises determining[[es]] which start dates to update the product availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{ day} / \log \text{ length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

7. (Original) A method according to Claim 6, wherein said function generates a list of numbers, wherein said method further comprises adding each number in the list to said current date to determine the product availability for which start dates should be updated by said updating step in the storage device.

8. (Currently Amended) A method according to Claim 1, wherein the product can be used beginning on a particular start date and may be used for different lengths of use, wherein for each length of use for each start date said accessing step comprises ~~and storing steps~~ accessing product sources[[,]] and requesting[[s]] product availability information concerning the product for the particular start date of use and length of use, and said storing step comprises storing[[es]] the product availability information in the storage device.

9. (Currently Amended) A method according to Claim 8, wherein for each start date, said updating step comprises updating[[es]] the product availability information for each length of use associated with the start date.

10. (Previously Presented) A method according to Claim 3, wherein the storage device comprises product availability information from a plurality of product sources, wherein said

method further comprises providing a score for each product source based at least on a popularity of the product source, and said updating step comprises updating the product availability information stored in the storage device for each product source based on the score associated with each product source.

11. (Currently Amended) A method according to Claim 10, wherein said updating step comprises updating[[es]] product availability information for product sources having higher scores more than product sources having lower scores.

12. (Currently Amended) A method according to Claim 10, wherein said updating step comprises performing[[s]] a selected number of updates of product source information for a given update session, and said updating step comprises assigning[[s]] more updates to product sources having higher scores than to product sources having lower scores.

13. (Original) A method according to Claim 12, wherein a minimum number of updates are performed on each product source independent of the product source's associated score.

14.-16. (Canceled)

17. (Currently Amended) A method according to Claim 1 [[16]], wherein said dividing step comprises dividing[[es]] the requested ~~start date and~~ length of use into at least two selected ~~start dates and~~ lengths of use, wherein each selected length of use includes at least two days.

18. (Currently Amended) A method according to Claim 1 [[16]], wherein said dividing step comprises creating[[es]] at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

19. (Currently Amended) A method according to Claim 1 [[16]], wherein said dividing step comprises creating[[es]] at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and said dividing step comprises using the following function to create the scenarios:

1) If LOS modulo $x = 0$

where

LOS = length of use of request

x = maximum length of use stored in the cache

Then

Scenario 1: A, B, C

$$A = x / 2$$

$$B = \sum_1^{\text{int}(\text{LOS} - (x/2)) / x} x$$

$$C = \text{LOS} - (A + B)$$

Scenario 2:

$$= \sum_1^{\text{int}(\text{LOS} / x)} x$$

2) If LOS modulo $x > 0$

Then

Scenario 1: A, B, C

$$A = (x - 1)$$

$$B = \sum_1^{\text{int}(\text{LOS} - A) / x} x$$

$$C = \text{LOS} - (A + B)$$

Scenario 2: C, B, A

20. (Currently Amended) A system for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element comprises:

means for accessing at least one product source and ~~requests~~ requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

means for storing the product availability information received from the product source in said storage device;

means for receiving a product availability request from ~~[[a]]~~ the user concerning a ~~selected requested~~ product, a requested start date and a requested length of use;

means for accessing the product availability information stored in the storage device for the selected product;

means for determining the availability of the ~~selected requested~~ product based on at least the product availability information stored in the storage device; ~~[[and]]~~

means for generating an availability response based on at least the product availability information stored in the storage device; and

means for updating the product availability information stored in the storage device more often for start dates of the ~~selected requested~~ product that occur sooner in time than for start dates that occur later in time,

wherein the requested product can be used beginning on a particular start date and may be used for different lengths of use from the start date,

wherein said means for storing stores product availability information including start dates and a maximum length of use for each start date, and

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said means for determining:
divides the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in said storage device, each selected length of use having an associated selected start date; and
determines the availability of the requested product for each selected start date and selected length of use to thereby determine the availability of the product for the requested start date and requested length of use.

21. (Previously Presented) A system according to Claim 20, wherein said updating means updates the product availability information stored in the storage device by accessing the product sources, requesting product availability information about the product, and storing the product availability information in the storage device.

22. (Canceled).

23. (Previously Presented) A system according to Claim 21, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said processing element uses a decaying exponential function to determine which start dates to update the product availability information in the storage device for, such that start dates that occur sooner in time are updated more often than start dates that occur later in time.

24. (Previously Presented) A system according to Claim 21, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said processing element determines which start dates to update the product availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{ day} / \log \text{ length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

25. (Previously Presented) A system according to Claim 21, wherein said storage device comprises product availability information from a plurality of product sources, wherein said processing element provides a score for each product source based at least on a popularity of the product source and updates the product availability information stored in said storage device for each product source based on the score associated with each product source.

26-27. (Canceled)

28. (Currently Amended) A system according to Claim 20 ~~[[27]]~~, wherein said processing element divides the requested ~~start date and~~ length of use into at least two selected ~~start dates and~~ lengths of use, wherein each selected length of use is at least two days.

29. (Currently Amended) A system according to Claim 20 ~~[[27]]~~, wherein said processing element creates at least two scenarios, wherein each scenarios includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

30. (Currently Amended) A system according to Claim 20 ~~[[27]]~~, wherein said processing element creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, said processing element uses the following function to create the scenarios:

1) If $LOS \bmod x = 0$

where

LOS = length of use of request

Appl. No.: 10/635,273
Amdt. dated 07/13/2007
Reply to Office action of April 19, 2007

x = maximum length of use stored in the cache

Then

Scenario 1: A, B, C

$$A = x / 2$$

$$B = \sum_{i=1}^{\text{int}((LOS-(x/2))/x)} x$$

$$C = LOS - (A + B)$$

Scenario 2:

$$= \sum_{i=1}^{\text{int}(LOS/x)} x$$

2) If $LOS \bmod x > 0$

Then

Scenario 1: A, B, C

$$A = (x - 1)$$

$$B = \sum_{i=1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

Scenario 2: C, B, A

31. (Currently Amended) A computer program product for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product source in a storage device;

third computer-readable program code means for receiving a product availability request from the [[a]] user concerning a ~~selected~~ requested product, a requested start date and a requested length of use;

fourth computer-readable program code means for accessing the product availability information stored in the storage device for the ~~selected~~ requested product;

fifth computer-readable program code means for determining the availability of the ~~selected~~ requested product based on at least the product availability information stored in the storage device; [[and.]]

sixth computer-readable program code means for updating product availability information stored in the storage device more often for start dates of the ~~selected~~ requested product that occur sooner in time than for start dates that occur later in time ;and

seventh computer-readable program code means for generating an availability response based on at least the product availability information stored in the storage device,

wherein the requested product can be used beginning on a particular start date and may be used for different lengths of use from the start date,

wherein said second computer-readable program code means stores product availability information including start dates and a maximum length of use for each start date, and

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said fifth computer-readable program code means:

divides the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated selected start date; and

determines the availability of the requested product for each selected start date and selected length of use to thereby determine the availability of the product for the requested start date and requested length of use.

32. (Previously Presented) A computer program product according to Claim 31, wherein said sixth computer-readable program code means updates the product availability information stored in the storage device by accessing the product sources, requesting product availability information about the product, and storing the product availability information in the storage device.

33. (Canceled).

34. (Previously Presented) A computer program product according to Claim 31, wherein use of a product may begin on one of a plurality of different start dates and may be used for different lengths of time, wherein said sixth computer-readable program code means determines which start dates to update the product availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{ day} / \log \text{ length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

35. (Previously Presented) A computer program product according to Claim 32, wherein the storage device comprises product availability information from a plurality of product sources, wherein said computer readable medium further comprises seventh computer-readable code means for providing a score for each product source based at least on a popularity of the product source, and said sixth computer-readable codes means updates the product availability information stored in the storage device for each product source based on the score associated with each product source.

36.-37. (Canceled)

38. (Currently Amended) A computer program product according to Claim 31 [[37]], wherein said fifth computer-readable program code means divides the requested ~~start date and~~ length of use into at least two selected ~~start dates and~~ lengths of use, wherein each selected length of use includes at least two days.

39. (Currently Amended) A computer program product according to Claim 31 [[37]], wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenarios includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

40. (Currently Amended) A computer program product according to Claim 31 [[37]], wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, said fifth computer-readable program code means uses the following function to create the scenarios:

1) If $LOS \text{ modulo } x = 0$

where

LOS = length of use of request

x = maximum length of use stored in the cache

Then

Appl. No.: 10/635,273
Amdt. dated 07/13/2007
Reply to Office action of April 19, 2007

Scenario 1 : A, B, C

$$A = x / 2$$

$$B = \sum_1^{\text{int}((LOS-(x/2))/x)} x$$

$$C = LOS - (A + B)$$

Scenario 2 :

$$= \sum_1^{\text{int}(LOS/x)} x$$

2) If LOS modulo x > 0

Then

Scenario 1 : A, B, C

$$A = (x - 1)$$

$$B = \sum_1^{\text{int}(LOS-A)/x)} x$$

$$C = LOS - (A + B)$$

Scenario 2 : C, B, A

41. (Currently Amended) A method for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product for different start dates prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

determining the availability of a requested product for a requested start date and a requested length of use selected by [[a]] the user based on at least the product availability information stored in the storage device; [[and]]

generating an availability response based on at least the product availability information stored in the storage device; and

updating product availability information stored in the storage device more often for start dates of the selected product that occur sooner in time than for start dates that occur later in time,

wherein said storing step comprises storing product availability information including start dates and a maximum length of use for each start date,

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said determining step comprises:

dividing the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated selected start date; and

determining the availability of the requested product for the requested start date and requested length of use by determining the availability of the requested product for each selected length of use and associated selected start date.

42. (Currently Amended) A method according to Claim 41, wherein said updating step comprises using uses a decaying exponential function to determine which start dates to update the product availability information in the storage device for, such that start dates that occur sooner in time are updated more often than start dates that occur later in time.

43. (Currently Amended) A method according to Claim 41, wherein said updating step comprises determining[[es]] which start dates to update the product availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{ day} / \log \text{ length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

44. (Original) A method according to Claim 43, wherein said function generates a list of numbers, wherein said method further comprises adding each number in the list to said current date to determine the product availability for which start dates should be updated by said updating step in the storage device.

45. (Currently Amended) A method according to Claim 41, wherein the product can be used beginning on a particular start date and may be used for different lengths of use, wherein for each length of use for each start date said accessing step comprises ~~and storing steps~~ accessing product sources[[,]] and requesting[[s]] product availability information concerning the product for the particular start date of use and length of use, and said storing step comprises storing[[es]] the product availability information in the storage device.

46. (Currently Amended) A method according to Claim 45, further comprising updating product availability information in the storage device more often for start dates that occur sooner in time than for start dates that occur later in time, wherein for each start date, said updating step comprises updating[[es]] the product availability information for each length of use associated with the start date.

47. (Currently Amended) A system for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, said system comprising:

- an interface connected to at least one product source;
- a processing element connected to said interface for communicating with the product source; and
- a storage device in electrical communication with said processing element, wherein said processing element comprises:

means for accessing at least one product source and requesting[[s]] product availability information concerning at least one product for different start dates prior to receipt of a product availability request from a user concerning the product;

means for storing the product availability information received from the product source in said storage device;

means for determining the availability of a requested product for a requested start date and a requested length of use selected by [[a]] the user based on at least the product availability information stored in said storage device; [[and]]

means for generating an availability response based on at least the product availability information stored in the storage device; and

means for updating product availability information stored in the storage device more often for start dates of the selected requested product that occur sooner in time than for start dates that occur later in time,

wherein said means for storing stores product availability information including start dates and a maximum length of use for each start date,

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said means for determining:

divides the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in said storage device, each selected length of use having an associated selected start date; and

determines the availability of the requested product for the requested start date and requested length of use by determining the availability of the requested product for each selected length of use and associated selected start date.

48. (Previously Presented) A system according to Claim 47, wherein said processing element uses a decaying exponential function to determine which start dates to update the product availability information in the storage device for, such that start dates that occur sooner in time are updated more often than start dates that occur later in time.

49. (Previously Presented) A system according to Claim 47, wherein said processing element determines which start dates to update the product availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{ day} / \log \text{ length})}$$

where

Start Date = date to be queried

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

50. (Currently Amended) A computer program product for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing at least one product source and requesting product availability information concerning at least one product for different start dates prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product source in a storage device;

third computer-readable program code means for determining the availability of a requested product for a requested start date and a requested length of use selected by [[a]] the user based on at least the product availability information stored in the storage device; [[and]]

fourth computer-readable program code means for updating product availability information stored in the storage device more often for start dates of the selected product that occur sooner in time than for start dates that occur later in time; and

fifth computer readable program code means for generating an availability response based on at least the product availability information stored in the storage device,

wherein the requested product can be used beginning on a particular start date and may be used for different lengths of use from the start date,

wherein said second computer-readable program code means stores product availability information including start dates and a maximum length of use for each start date, and

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said third computer-readable program code means:

divides the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated selected start date; and

determines the availability of the requested product for the requested start date and requested length of use by determining the availability of the requested product for each selected length of use and associated selected start date.

51. (Previously Presented) A computer program product according to Claim 50, wherein said fourth computer-readable program code means uses a decaying exponential function to determine which start dates to update the product availability information in the storage device for such that start dates that occur sooner in time are updated more often than start dates that occur later in time.

52. (Previously Presented) A computer program product according to Claim 50, wherein said fourth computer-readable program code means determines which start dates to update the product availability information for in the storage device by using the following function:

$$\text{Start Date} = N^{(\log \text{ day} / \log \text{ length})}$$

where

Start Date = date to be queried

N = integer number (0, 1, 2, 3, . . . Day)

Day = maximum number of days out to be queried

Length = maximum number of days that can be returned in a query list.

53-64. (Canceled)

65. (Currently Amended) A method for providing product availability information to a user from at least one product source, where a product has one or more associated ~~different~~ availability start dates indicating when a user may initiate use of the product and ~~for different~~ has one or more available lengths of use ~~from the~~ associated with each start date, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

receiving a product availability request from ~~[[a]]~~ the user concerning a ~~selected~~ requested product, a requested start date, and a requested length of use;

accessing the product availability information stored in the storage device for the ~~selected~~ requested product; ~~[[and]]~~

determining the availability of the ~~selected~~ requested product based on at least the product availability information stored in the storage device~~[[,]]; and~~

generating an availability response based on at least the product availability information stored in the storage device;

wherein said storing step ~~only~~ comprises storing~~[[es]]~~ product availability information including start dates and ~~for~~ a maximum ~~number of~~ length~~[[s]]~~ of use for each start date,

wherein when the requested length of use for ~~[[a]]~~ the requested product exceeds ~~[[a]]~~ the maximum length of use stored in the storage device, said determining step comprises:

dividing the requested length of use ~~requested by the user~~ into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated start date; and

determining the availability of the requested product for each selected length of use and associated start date to thereby determine the availability of the requested product for the requested start date and requested length of use.

66-67. (Canceled)

68. (Currently Amended) A method according to Claim 65, wherein said dividing step comprises dividing[[es]] the requested ~~start date and~~ length of use into at least two selected ~~start dates and~~ lengths of use, wherein each selected length of use includes at least two days.

69. (Currently Amended) A method according to Claim 65, wherein said dividing step comprises creating[[es]] at least two scenarios, wherein each scenario[[s]] includes a set of selected start dates and lengths of use that are each less than the maximum length of use and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

70. (Currently Amended) A method according to Claim 65, wherein said dividing step comprises creating ~~creates~~ at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and said dividing step comprises using the following function to create the scenarios:

1) If $LOS \bmod x = 0$

where

LOS = length of use of request

x = maximum length of use stored in the cache

Then

Appl. No.: 10/635,273
Amdt. dated 07/13/2007
Reply to Office action of April 19, 2007

Scenario 1: A, B, C

$$A = x / 2$$

$$B = \sum_{i=1}^{\text{int}((LOS-(x/2))/x)} x$$

$$C = LOS - (A + B)$$

Scenario 2:

$$= \sum_{i=1}^{\text{int}(LOS/x)} x$$

2) If LOS modulo $x > 0$

Then

Scenario 1: A, B, C

$$A = (x - 1)$$

$$B = \sum_{i=1}^{\text{int}(LOS-A)/x} x$$

$$C = LOS - (A + B)$$

Scenario 2: C, B, A

71. (Previously Presented) A method according to Claim 65, wherein for each start date there are a maximum length of use and different shorter lengths of use, wherein said storing step may determine which of the shorter lengths of use can be determined by using the maximum length of use and thereby only stores in the storage device product availability information for the maximum length of use and the shorter lengths of use that are not derivable from the maximum length of use.

72. (Previously Presented) A method according to Claim 71, wherein if a price associated with a first shorter length of use is substantially equal to a price associated with the maximum length of use, then said storing step determines that the first shorter length of use can be determined using the maximum length of use.

73. (Currently Amended) A system for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product and where the product may be used for different lengths of use time, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element comprises:

means for accessing at least one product source and requesting[[s]] product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

means for storing the product availability information received from the product source in [[a]] the storage device;

means for receiving a product availability request from [[a]] the user concerning a selected requested product, a requested start date, and a requested length of use;

means for accessing the product availability information stored in the storage device for the selected requested product; [[and]]

means for determining the availability of the selected requested product based on at least the product availability information stored in the storage device[[,]]; and

means for generating an availability response based on at least the product availability information stored in the storage device;

wherein said ~~processing element only~~ means for storing stores product availability information for a maximum ~~number of~~ length[[s]] of use for each start date,

wherein when the requested length of use for [[a]] the requested product exceeds [[a]] the maximum length of use stored in the storage device, said means for determining system determines the availability by:

dividing the requested length of use ~~requested by the user~~ into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated start date; and

determining the availability of the requested product for each selected length of use and associated start date to thereby determine the availability of the requested product for the requested start date and requested length of use.

74. (Canceled).

75. (Currently Amended) A system according to Claim 73, wherein said processing element divides the requested ~~start date and~~ length of use into at least two selected ~~start dates and~~ lengths of use, wherein each selected length of use includes at least two days.

76. (Previously Presented) A system according to Claim 73, wherein said processing element creates at least two scenarios, wherein each scenarios includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

77. (Previously Presented) A system according to Claim 73, wherein said processing element creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, said processing element using the following function to create the scenarios:

1) If $LOS \text{ modulo } x = 0$

where

LOS = length of use of request

x = maximum length of use stored in the cache

Then

Appl. No.: 10/635,273
Amdt. dated 07/13/2007
Reply to Office action of April 19, 2007

Scenario 1: A, B, C

$$A = x / 2$$

$$B = \sum_1^{\text{int}((LOS - (x/2))/x)} x$$

$$C = LOS - (A + B)$$

Scenario 2:

$$= \sum_1^{\text{int}(LOS/x)} x$$

2) If $LOS \bmod x > 0$

Then

Scenario 1: A, B, C

$$A = (x - 1)$$

$$B = \sum_1^{\text{int}(LOS - A)/x} x$$

$$C = LOS - (A + B)$$

Scenario 2: C, B, A

78. (Previously Presented) A system according to Claim 73, wherein for each start date there are a maximum length of use and different shorter lengths of use, wherein said processing element determines which of the shorter lengths of use can be determined by using the maximum length of use and thereby only stores in the storage device product availability information for the maximum length of use and the shorter lengths of use that are not derivable from the maximum length of use.

79. (Previously Presented) A system according to Claim 78, wherein if a price associated with a first shorter length of use is substantially equal to a price associated with the maximum length of use, then said processing element determines that the first shorter length of use can be determined using the maximum length of use.

80. (Previously Presented) A computer program product for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product and where the product may be used for different lengths of time, wherein the computer program product comprises:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer-readable program code means comprising:

first computer-readable program code means for accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

second computer-readable program code means for storing the product availability information received from the product source in a storage device;

third computer-readable program code means for receiving a product availability request from ~~[[a]]~~ the user concerning a ~~selected~~ requested product, a requested start date, and a requested length of use;

fourth computer-readable program code means for accessing the product availability information stored in the storage device for the ~~selected~~ requested product; and

fifth computer-readable program code means for determining the availability of the ~~selected~~ requested product based on at least the product availability information stored in the storage device~~[[,]]~~; and

sixth computer-readable program code means for generating an availability response based on at least the product availability information stored in the storage device,

wherein said second computer-readable program code means ~~only~~ stores product availability information for a maximum ~~number of~~ length~~[[s]]~~ of use for each start date,

wherein when the requested length of use for ~~[[a]]~~ the requested product exceeds ~~[[a]]~~ the maximum length of use stored in the storage device, said fifth computer-readable code means:

divides the requested length of use ~~requested by the user~~ into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated start date; and

determines the availability of the requested product for each selected length of use and associated start date to thereby determine the availability of the requested product for the requested start date and requested length of use.

81-82. (Canceled).

83. (Currently Amended) A computer program product according to Claim 80 ~~[[81]]~~, wherein when the requested length of use for ~~[[a]]~~ the requested product exceeds ~~[[a]]~~ the maximum length of use stored in the storage device, ~~wherein~~ said fifth computer-readable program code means divides the requested ~~start date and~~ length of use into at least two selected ~~start dates and~~ lengths of use, wherein each selected length of use ~~covers~~ includes at least two days.

84. (Currently Amended) A computer program product according to Claim 83, wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenario~~[[s]]~~ includes a set of selected start dates and lengths of use that are each less than the maximum length of use, and wherein at least one of the start dates of one scenario is different from the start date of the other scenario.

85. (Previously Presented) A computer program product according to Claim 81, wherein said fifth computer-readable program code means creates at least two scenarios, wherein each scenario includes a set of selected start dates and lengths of use that are each less than the maximum length of use, said dividing step using the following function to create the scenarios:

1) If $LOS \bmod x = 0$

where

LOS = length of use of request

Appl. No.: 10/635,273
Amdt. dated 07/13/2007
Reply to Office action of April 19, 2007

x = maximum length of use stored in the cache

Then

Scenario 1 : A, B, C

$$A = x / 2$$

$$B = \sum_1^{\text{int}((LOS-(x/2))/x)} x$$

$$C = LOS - (A + B)$$

Scenario 2 :

$$= \sum_1^{\text{int}(LOS/x)} x$$

2) If $LOS \bmod x > 0$

Then

Scenario 1 : A, B, C

$$A = (x - 1)$$

$$B = \sum_1^{\text{int}(LOS - A)/x} x$$

$$C = LOS - (A + B)$$

Scenario 2 : C, B, A

86. (Currently Amended) A method for providing product availability information to a user from at least two product sources, said method comprising:

accessing the at least two product sources and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product sources in a storage device;

determining the availability of a requested product for a requested start date and a requested length of use requested by [[a]] the user based on at least the product availability information stored in the storage device;

providing the user with product availability information concerning the requested product from each product source;

accumulating the number of times that a product source's product relates to an availability request and the number of times that the product source had availability for the requested product;

dividing the number of times that the product source had availability for the requested product by the number of times that a product source's product related to an availability request to thereby determine a hit ratio;

comparing the hit ratio to a hit ratio threshold; and

updating the product availability information stored in the storage device for product sources, wherein said updating step increases the number of times product availability information is updated for a product source having a hit ratio that is less than or equal to the hit ratio threshold.

wherein said storing step comprises storing product availability information including start dates and a maximum length of use for each start date,

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said determining step comprises:

dividing the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated selected start date; and

determining the availability of the requested product for the requested start date and requested length of use by determining the availability of the requested product for each selected length of use and associated selected start date.

87. (Previously Presented) A method according to Claim 86, wherein said updating step decreases the number of times product availability information is updated for a product source having a hit ratio that is at least as great as the hit ratio threshold.

88. (Currently Amended) A system for providing product availability information to a user from at least two product sources, said system comprising:

an interface connected to at least one product source;

a processing element connected to said interface for communicating with the product source; and

a storage device in electrical communication with said processing element, wherein said processing element comprises:

means for accessing the at least two product sources and requesting[[s]] product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

means for storing the product availability information received from the product sources in a storage device;

means for determining the availability of a requested product for a requested start date and a requested length of use by [[a]] the user based on at least the product availability information stored in the storage device;

means for providing the user with product availability information concerning the requested product from each product source;

means for accumulating the number of times that a product source's product relates to an availability request and the number of times that the product source had availability for the requested product;

means for dividing the number of times that the product source had availability for the requested product by the number of times that a product source's product related to an availability request to thereby determine a hit ratio;

means for comparing the hit ratio to a hit ratio threshold; and

means for updating the product availability information stored in the storage device for product sources, wherein said updating means comprises means for increasing the number of times product availability information is updated for a product source having a hit ratio that is less than or equal to the hit ratio threshold,

wherein said means for storing stores product availability information including start dates and a maximum length of use for each start date,

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said means for determining:

divides the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in said storage device, each selected length of use having an associated selected start date; and

determines the availability of the requested product for the requested start date and requested length of use by determining the availability of the requested product for each selected length of use and associated selected start date.

89. (Previously Presented) A system according to Claim 88, wherein said updating means comprises means for decreasing the number of times product availability information is updated for a product source having a hit ratio that is at least as great as the hit ratio threshold.

90. (Currently Amended) A method for providing product availability information to a user from at least one product source, where a product has one or more associated different start dates indicating when a user may initiate use of the product, said method comprising:

accessing at least one product source and requesting product availability information concerning at least one product prior to receipt of a product availability request from a user concerning the product;

storing the product availability information received from the product source in a storage device;

receiving a product availability request from a user concerning a selected requested product, a requested start date, and a requested length of use;

accessing the product availability information stored in the storage device for the selected product;

determining the availability of the ~~selected~~ requested product based on at least the product availability information stored in the storage device; [[and]]

generating an availability response based on at least the product availability information stored in the storage device; and

updating the product availability information stored in the storage device according to seasonal information, wherein the seasonal information comprises a range of dates, wherein updating the product availability information stored in the storage device comprises updating more often for start dates within the date range defined by the seasonal information than for start dates not within the date range defined by the seasonal information,

wherein said storing step comprises storing product availability information including start dates and a maximum length of use for each start date,

wherein when the requested length of use for the requested product exceeds the maximum length of use stored in the storage device, said determining step comprises:

dividing the requested length of use into at least two selected lengths of use that are each less than the maximum length of use stored in the storage device, each selected length of use having an associated selected start date; and

determining the availability of the requested product for the requested start date and requested length of use by determining the availability of the requested product for each selected length of use and associated selected start date.

91. (Currently Amended) A method according to Claim 90, wherein the seasonal information comprises the dates of a holiday season, and wherein updating the product availability information stored in the storage device comprises updating more often for start dates within the holiday season than for start dates not within the holiday season.